

## RULE 461

### Gasoline Transfer and Dispensing

#### (A) General Description

- (1) Purpose: The purpose of this rule is to limit the emissions of volatile organic compounds (VOC) and toxic compounds (such as benzene) from the transfer and marketing of gasoline, and in conjunction with Rules 462 and 463, limit the emissions from the storage, transfer, and dispensing of gasoline, including bulk facilities, retail service stations, and others, the transport of fuels between these facilities and the transfer of fuel into motor vehicle tanks.
- (2) Applicability: This rule applies to any gasoline storage and dispensing facility and to any retail gasoline station operating equipment within the MDAQMD jurisdiction. Such facilities are required to have either an authority to construct or a permit to operate such equipment pursuant to provisions of District Regulation II and or Regulation XIII. Specifically, district permit identification numbers beginning with either a "G" or an "N" are impacted by this rule. The permit identification number prefix "G" identifies retail gasoline dispensing equipment; and "N" identifies non-retail gasoline dispensing equipment under permit with MDAQMD.

#### (B) Definitions

- (1) "Certified Vapor Recovery System" - is a system to limit emissions of gasoline, which has been certified by the California Air Resources Board in accordance with specific criteria listed within the California Administrative Code.
- (2) "Gasoline" - means any organic liquid, including petroleum distillate and methanol having a Reid Vapor Pressure of 200 mm Hg (3.9 pounds per square inch), or greater, and used as a motor vehicle fuel, or any fuel which is commonly known or sold as gasoline.
- (3) "Gasoline Storage and Dispensing Facility" - means any aggregate of one or more stationary storage containers, together with, but not limited to, dispensers, pumps, loading racks and/or control equipment used to store and transfer gasoline.

- (4) "Gasoline Vapors" - means the organic compounds of gasoline, which exist in a vapor state and include, where present, entrained liquid gasoline.
- (5) "Retail Gasoline Station" - means any motor vehicle refueling facility subject to payment of California sales tax on gasoline sales.
- (6) "Submerged Fill Pipe" - means any discharge pipe or nozzle that meets one of the following conditions:
  - (a) Where the tank is filled from the top, the end of the discharge pipe or nozzle is totally submerged when the liquid level is 6 inches from the bottom of the tank.
  - (b) Where the tank is filled from the side, the end of the discharge pipe or nozzle is totally submerged when the liquid level is 18 inches from the bottom of the tank.
- (7) "Vapor Recovery System" - means a system that is designed to collect or capture the vapors released and/or generated during the dispensing, transfer and/or storage of liquids, and is capable of storage, transferring and/or disposal of the recovered vapors.
- (8) "Vapor Tight (Fugitive Vapor Leak)" - means the detection of less than 10,000 ppm, as methane, using an appropriate hydrocarbon analyzer when sampling is performed according to the procedures specified in EPA Method 21.

(C) **Requirements**

- (1) Gasoline Transfer Into or From Stationary Storage Tanks and Delivery Systems A person shall not transfer, permit the transfer or provide equipment for the transfer of gasoline into or from any tank truck, trailer, or railroad tank car into any stationary storage container with a capacity of more than 950 liters (251 gallons) unless the transfer is made to a storage container equipped as required in Rule 463 or unless all of the following conditions are met:
  - (a) Such container is equipped with a permanent submerged fill pipe, and
  - (b) Such delivery vessel or container is equipped with a vapor recovery system which has been certified by the California Air Resources Board, and the facility's vapor recovery system shall be capable of recovering or processing 95% of the displaced gasoline vapors, and

- (c) All vapor return lines are connected between the tank truck, trailer, or railroad tank car and the stationary storage container, and the vapor recovery system is in operation in accordance with the manufacturer's specifications, and the delivery vehicle, including all hoses, fittings, and couplings, is maintained in a vapor-tight condition, as defined by the applicable California Air Resources Board certification and test procedures (Section G), and all equipment is operated and maintained according to the manufacturer's specifications.
- (d) Hatch openings are limited to no more than 3 minutes in duration for visual inspection, provided that pumping has been stopped for at least 3 minutes prior to opening, and the hatch is closed fully before pumping is resumed.
- (e) Except for above ground tanks, all lines are gravity drained, in such a manner that upon disconnect no liquid spillage would be expected.
- (f) Above ground tanks shall be equipped with dry breaks, such that liquid spillage upon disconnect shall not exceed 10 milliliters; and
- (g) Equipment subject to this section is operated and maintained, with no defects, as follows:
  - (i) All fill tubes are equipped with vapor-tight covers, including gaskets; and
  - (ii) All dry breaks have vapor-tight seals and are equipped with vapor-tight covers or dust covers; and
  - (iii) Coaxial fill tubes are operated so there is no obstruction of vapor passage from the storage tank back to the delivery vehicle; and
  - (iv) The fill tube assembly, including fill tube, fittings and gaskets, is maintained to prevent vapor leakage from any portion of the vapor recovery system, and
  - (v) All storage tank vapor return pipes without dry breaks are equipped with vapor-tight covers, including gaskets.
- (2) Gasoline Transfer Into Vehicle Fuel Tanks - A person shall not transfer, or permit the transfer or provide equipment for the transfer of gasoline from a stationary storage container subject to the provisions of Section (C)(1), or from a storage container to which gasoline has been transferred from another container subject to the provisions of Section(C)(1), into any motor vehicle tank of greater than 19 liters (5 gallons) capacity unless:

- (a) The dispensing unit used to transfer the gasoline from the stationary storage container to the motor vehicle fuel tank is equipped with a vapor recovery system which has been certified by the California Air Resources Board as capable of recovering 95% of the displaced gasoline vapors; and
- (b) The vapor recovery system is operating in accordance with the manufacturer's specifications; and
- (c) Equipment subject to this rule is operated and maintained with none of the following defects, pursuant to the definitions in California Administrative Code Section 94006, Subchapter 8, Chapter 1, Part III, of Title 17:
  - (i) Torn or cut boots;
  - (ii) Torn or cut face seals or face cones;
  - (iii) Loose or broken retractors;
  - (iv) Boots clamped or otherwise held in an open position;
  - (v) Leaking nozzles;
  - (vi) Loose, missing, or disconnected nozzle components, including but not limited to boots, face seals, face cones, check valve wires, diaphragm covers and latching devices;
  - (vii) Defective shutoff mechanisms;
  - (viii) Loose, missing, or disconnected vapor fuel hoses and associated components including but not limited to flow restrictors, swivels and anti-recirculation valves;
  - (ix) Crimped, cut, severed, or otherwise damaged vapor or fuel hoses;
  - (x) Missing, turned off, or otherwise not operating assist type vapor recovery systems, or any components of such systems;
  - (xi) Improper or non-"CARB certified" equipment or components;
  - (xii) Inoperative, severely malfunctioning or missing vacuum producing device;
  - (xiii) Inoperative, loose, missing or disconnected pressure/vacuum relief valves, vapor check valves or dry breaks.

(3) Other Activities & Equipment

- (a) Newly installed vapor recovery systems used to comply with the provisions of this rule shall:
  - (i) Be limited to those systems certified by the Air Resources Board as the latest generation equipment at the time the installation is initiated, and
  - (ii) Utilize only equipment identified by the Air Resources Board as achieving the highest reliability and maintainability compatible with the certified system selected for installation.
  - (iii) Utilizing dispensing nozzles equipped with a hold-open latch unless the local fire code prohibits the use of the hold-open latch.
- (b) Vapor processing or vapor recovery systems used to comply with the provisions of this rule shall comply with all safety, fire, weights and measures, and other applicable codes and/or regulations.
- (c) A person shall not offer for sale, sell or install within the district any new or rebuilt vapor recovery equipment unless the components and parts clearly identify by markings the certified manufacturing company and/or certified rebuilding company.
- (d) Vapor recovery systems required under Section (C)(1) or Section (C)(2) shall at all times be maintained in accordance with the manufacturer's specifications and the State's certification.
- (e) When problems or defects are detected and are associated with any vapor recovery, storage, or delivery vessel or dispensing equipment, other than a breakdown of the central vapor incineration or processing unit, the owner/operator shall at the end of the cycle remove the equipment from service and not use the equipment until it has been repaired, replaced or adjusted as necessary to remove the problem or defect.

As applied to this subsection, the term "end of the cycle" means:

- (i) for delivery vehicles when the delivery vehicle is emptied or, if not emptied, before taking on more gasoline.
- (ii) for transferring gasoline to a motor vehicle is at the time the problem is detected, or at the end of refueling the current vehicle.

- (f) A person shall not perform or permit the "pump-out" (bulk transfer) of gasoline from a storage container subject to Section (C)(1) unless such bulk transfer is performed using a vapor recovery system capable of returning the displaced vapors from the delivery vessel or other container being filled back to the stationary storage container. This vapor recovery is not required where the container is to be removed or filled with water for testing. For visual inspections, the requirements of Subsection (C)(1)(d) are applicable.
- (g) A person shall not store, or allow the storage of, gasoline in any stationary storage container with a capacity of more than 950 liters (251 gallons) unless such container:
  - (i) Complies with Rule 463; or
  - (ii) Is equipped with a permanent submerged fill pipe and a certified vapor recovery system.
- (h) The operator of each gasoline dispensing facility subject to Section (C)(2) above shall conspicuously post in the gasoline dispensing area the operating instructions, the district's toll-free telephone number for complaints and a District-specified warning sign.

#### (D) Exemptions

- (1) The provisions of this rule shall not apply to the transfer of gasoline:
  - (a) Into or from any stationary storage container of less than 550 gallons capacity, which is used for the fueling of implements of husbandry as such vehicles are defined in Division 16 (Section 36000 et. seq.) of the California Vehicle Code, if such container is equipped with a permanent submerged fill pipe.
  - (b) Into or from any underground stationary container using only hand pumping, for the purpose of providing emergency services during loss of commercial power, where the district Air Pollution Control Officer (APCO) has certified that such pumping cannot comply with the provisions of Section (C)(2) and where such hand pumping capability is otherwise required by law or regulation.
  - (c) Into or from any stationary storage container of any retail gasoline station installed prior to December 19, 1988 which meets all the following conditions:

- (i) The monthly gasoline throughput of the facility does not exceed 10,000 gallons **and** the annual gasoline throughput of the facility does not exceed 60,000 gallons, on a calendar month and calendar year basis, respectively, beginning with 1988 and;
  - (ii) The facility has not been modified after December 19, 1988 where modified means the installation of a new tank, replacement of any existing tank, and/or excavation (exposing) of 50% or more of a facility's total underground liquid piping from the stationary storage tanks to the gasoline dispensers, and;
  - (iii) The transfer of gasoline from any delivery vehicle into those stationary storage containers with a capacity of more than 950 liters (251 gallons) is limited to those containers which are equipped with permanent submerged fill pipes, and
  - (iv) All dispensing nozzles are equipped with a hold-open latch unless the local fire code prohibits the use of the hold-open latch and;
  - (v) The facility owner/operator provides adequate evidence
    - (a) That compliance would be economically prohibitive and the alternative would be closure of the facility, and
    - (b) That the facility provides essential emergency fueling for motor vehicles and closure would result in a lessening of public safety, and
    - (c) That no other non-exempt retail facility open during reasonable hours exists within a driving distance of 5 miles; and
  - (vi) The owner/operator receives written approval from the district APCO in response to a formal request for exemption. Such exemptions shall be based solely on the evidence demonstrating the validity of the conditions listed above. If during any calendar month thereafter the gasoline throughput exceeds 10,000 gallons, the exemption shall cease, effective the first day of the following calendar month. If during any calendar year thereafter the gasoline throughput exceeds 60,000 gallons, the exemption shall cease, effective the first day of the following calendar year.
- (2) Any facility classified as exempt or claiming to be exempt pursuant to this section shall meet the same record keeping requirements as expressed in Section (E) of this rule so as to be able to prove the claimed exempt status.

(E) Record Keeping and Reporting

- (1) The owner or operator shall maintain a log of all inspections, repairs, and maintenance on equipment subject to this rule.
- (2) The owner or operator of a facility exempt under Subsections (D)(1)(a) or (D)(1)(d), in order to determine the exemption, shall prepare a log showing the monthly throughput and a summary of the throughput for the calendar year to date. Therefore, a facility exempt under Subsection (D)(1)(a) must also show the throughput used to refuel implements of husbandry.
- (3) A daily log of product throughput shall be maintained by each facility.
- (4) All required records and logs shall be maintained at the facility for at least two (2) years and shall be made available to the APCO upon request.

(F) Compliance Schedule

- (1) Existing facilities which were exempted by Subsection (D)(1)(a):
  - (a) The owner or operator of any stationary storage container which was exempt by Subsection (D)(1)(a) and which is modified on or after December 19, 1988 shall comply with this rule in accordance with the following schedule:
    - (i) Secure an Authority to Construct from the district prior to the commencement of modifications.
    - (ii) Secure all other permits and approvals as required.
    - (iii) Assure compliance with Sections (C)(1) and (C)(2) at the time gasoline is first received or dispensed from the facility.
  - (b) The owner or operator of any stationary storage container which was exempt by Subsection (D)(4) and which is no longer exempt, shall comply with this rule in accordance with the following schedule:
    - (i) Secure an Authority to Construct from the district by March 31 of the year of the loss of the exemption and before the commencement of modifications.
    - (ii) Secure all other permits and approvals as required.

- (iii) Commence construction by September 30 of the year of the loss of the exemption.
- (iv) Assure compliance with Sections (C)(1) and (C)(2) by December 30 of the year of the loss of the exemption.

#### (G) Test Methods For Compliance Verification

A violation determined by any one of these test methods shall constitute a violation of the rule.

- (1) Vapor Tightness (Fugitive Vapor Leaks) for all equipment described in Section (C) shall be determined by EPA Method 21 - *Determination of Volatile Organic Compounds Leaks*.
- (2) Vapor Recovery System Efficiency for Delivery Vessels shall be determined by the EPA Method entitled *Control of Organic Compound Leaks from Gasoline Tank Trucks and Vapor Collection Systems* (method specified in the CTG EPA-450/2-78-051), or the CARB Method entitled, "Certification and Test Procedures for Vapor Recovery Systems of Gasoline Delivery Tanks".
- (3) Reid Vapor Pressure shall be determined in accordance with ASTM Method D 323-82.
- (4) Vapor Recovery System Efficiency for Bulk Plants shall be determined by CARB Method 202, "Certification of Vapor Recovery Systems - Bulk Plants".
- (5) Vapor Recovery System Efficiency for Terminals shall be determined by CARB Method 203, "Certification of Vapor Recovery Systems - Gasoline Terminals".
- (6) Vapor Recovery System Efficiency for Service Stations shall be determined by the CARB Methods in "Test Procedures for Determining the Efficiency of Gasoline Vapor Recovery Systems at Service Stations".

[SIP: Approved 5/3/95, 60 FR 21702, 40 CFR 52.220(c)(198)(I)(E)(1); Approved 6/9/82, 47 FR 25013, 40 CFR 52.220(c)(85)(v)(A); Approved 12/21/78, 43 FR 59489, 40 CFR 52.220(c)(42)(xiii)(A); Approved 7/26/77, 42 FR 37976, 40 CFR 52.220(c)(35)(ii) and 40 CFR 52.220(c)(31)(vi)(A)]

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